

## LIST OF FOOD POISONING PATHOGENS BY INCUBATION PERIOD, SYMPTOMS, DIAGNOSIS, AND SOURCE

Approximate Time from Ingestion to Symptoms	Main Symptoms	Infectious or Poisonous Agent / Origin	Associated Disease / Illness Diagnosis	Main / Typical Food Sources
5 min - 3 hours	Tingling/burning sensation in mouth; flushed face/neck; headaches; itchy skin; (nausea; vomit; diarrhoea)	Scombrototoxin <b>TOXIN</b>	Scombrototoxin Poisoning	Scombroid fish e.g. tuna, mackerel, bonito
5 min - 4 hours	Tingling and numbness of lips, tongue, and throat; muscular aches; dizziness; reversal of sensation of hot and cold; diarrhoea; vomiting	Brevetoxins <b>TOXIN</b>	Neurotoxic Shellfish Poisoning (NSP)	Molluscs such as mussels, clams, oysters and scallops
20 min - 3 hours	Numbness of lips and tongue; uncoordinated movements; feeling of floating/lightness; headache; stomach pains; nausea; diarrhoea and/or vomiting; paralysis; respiratory distress; convulsions; <b>death</b>	Tetrodotoxin <b>TOXIN</b>	Pufferfish Poisoning	Pufferfish (Fugu)
30 min - 2 hours	Nausea; vomit; diarrhoea; stomach cramps; twitching and drowsiness; sweating; salivation; visual distortions; mood changes, delirium; hallucinations	Muscarine <b>TOXIN</b>	Poisonous Mushrooms	Wild Mushrooms; Amanita Muscaria (fly mushroom or fly agaric) Inocybe and Clitocybe species of mushrooms
30 min - 2 hours	Tingling around face and extremities; drowsiness; incoherent speech; respiratory paralysis <b>(death)</b>	Saxitoxin <b>TOXIN</b>	Paralytic Shellfish Poisoning (PSP)	Molluscs such as mussels, clams, oysters and scallops
30 min - 3 hours	Mild gastroenteritis (nausea, vomit, diarrhoea, and abdominal cramps); chills; headache; fever	Okadaic Acid <b>TOXIN</b>	Diarrhoeic Shellfish Poisoning (DSP)	Molluscs such as mussels, clams, oysters and scallops
1 - 3 hours	Extreme nausea; (severe) vomiting; diarrhoea	Phytohaemagglutinin <b>TOXIN</b>	Red Kidney Beans Poisoning	Red kidney beans
1 - 6 hours	Severe vomiting; abdominal cramps	Staphylococcus Aureus <b>BACTERIAL</b>	Staphylococcal Food Poisoning	Foods requiring a lot of handling e.g. meats, poultry products; bakery products

				with cream fillings; sandwiches
1 - 6 hours	Nausea; vomiting; abdominal cramps	Bacillus Cereus (emetic strains) <b>BACTERIAL</b>	Bacillus Cereus Food Poisoning	Starchy and dried food such as rice and pasta
1 - 6 hours	Diarrhoea; vomiting; abdominal pain; reversal of hot and cold sensations; muscular aches; dizziness; anxiety; sweating; numbness and tingling of digits	Ciguatoxin and Maitotoxin <b>TOXIN</b>	Ciguatera Fish Poisoning	Marine finfish e.g. snapper, sea bass, grouper, barracuda, mackerel
3 - 18 hours	Chills; headaches; diarrhoea; nausea; vomiting; abdominal cramps	Azaspiracids <b>TOXIN</b>	Azaspiracids Poisoning (AZP)	Mussels (although toxins have also been found to accumulate in oysters, scallops, clams, and cockles)
4 - 6 hours - 2 weeks	Violent abdominal pain; nausea; vomiting; (coughing up larvae; fever; bloody stools)	Anasakis Simplex and Pseudoterranova Decipiens <b>PARASITE</b>	Anisakiasis	Raw or undercooked marine fish e.g. cod, haddock, mackerel, salmon, herring, flounder, monkfish
6 - 15 hours	Extreme abdominal pain; nausea; vomiting; diarrhoea; thirst; collapse; convulsions; coma; irreversible liver failure; <b>death</b>	Phalloidine and Amanitine <b>TOXIN</b>	Poisonous Mushroom Poisoning	Amanita Phalloides AKA Death Angel or Death Cup
6 - 15 hours	Watery diarrhoea; abdominal cramps	Bacillus Cereus (diarrhoea strains) <b>BACTERIAL</b>	Bacillus Cereus Food Poisoning	Meats, milk, dairy products, fish vegetables
6 - 24 hours (avg. 8 - 12 hours)	Diarrhoea; abdominal pain	Clostridium Perfringens <b>BACTERIAL</b>	Clostridium Perfringens Food Poisoning	Meat and poultry (stews, gravies, joints and pies)
7 - 36 hours	Abdominal pain; vomiting; bloody diarrhoea; fever	Shigella species	Dysentery	Wide variety of faecally-contaminated foods that require a lot of handling e.g. salads, fruits, vegetables, shellfish
8 - 24 hours (avg. 11 hours)	Chills; fever; severe abdominal pains; severe bloody diarrhoea	Entero-Invasive Escherichia Coli (EIEC) <b>BACTERIAL</b>	E. Coli Food Poisoning	Faecally contaminated foods e.g. vegetables, cheese

8 - 44 hours (avg. 26 hours)	(Sudden) watery diarrhoea; dehydration; shock	Enterotoxigenic Escherichia coli (EPEC) <b>BACTERIAL</b>	Traveller's diarrhoea	Faecally contaminated foods e.g. meat and milk/dairy products
9 - 25 hours	Profuse watery diarrhoea; abdominal cramps; nausea (vomiting; fever)	Vibrio Parahaemolyticus <b>BACTERIAL</b>	Virbio Parahaemolyticus Food Poisoning	Fish and Shellfish
12 - 48 hours	Diarrhoea and vomiting; abdominal cramps; fever; headache; dehydration	Salmonella species (excluding Typhi and Paratyphi) <b>BACTERIAL</b>	Salmonellosis	Meat, poultry, milk/dairy products, eggs, eggs products, seafood, fruit and vegetables
12 - 72 hours	Tiredness; dizziness; headaches; double vision; dryness of skin/mouth/throat; increasing respiratory paralysis; hear failure; <b>death</b>	Clostridium Botulinum <b>TOXIN</b>	Botulism	Wide variety, including dairy products (e.g. yogurts), vegetables, fishery products (e.g. salmon), meat and meat products, sauces, dressings
12 hours - 5 days (avg. 1 - 2 days)	(Projectile) vomiting; diarrhoea; abdominal pain; headache; low- grade fever	Norovirus <b>VIRUS</b>	Viral Gastroenteritis	Oysters, mussels, clams, cockles; soft fruit, particularly berries; salad vegetables; desserts; bakery products; prepared salads; sandwiches
16 - 48 hours	Mild diarrhoea; may lead to septicaemia and <b>death</b> in some weakened individuals	Vibrio Vulnificus <b>BACTERIAL</b>	Vibrio Vulnificus Food Poisoning	Raw shellfish, most particularly oysters
18 - 72 hours	Vomiting; diarrhoea (watery or bloody); fever; malaise	Enteropathogenic Escherichia Coli (EPEC) <b>BACTERIAL</b>	Infantile Diarrhoea	Mainly raw or uncooked beef or chicken but could involve any faecally- contaminated food
24 hours	Nausea; vomiting; abdominal cramps; diarrhoea	Domoic Acid <b>TOXIN</b>	Amnesic Shellfish Poisoning (ASP)	Molluscs such as mussels, clams, oysters and scallops
24 hours - 11 days (avg. 2 - 5 days)	Severe Diarrhoea (sticky, watery, and may contain blood); headache; fever; abdominal pain	Campylobacter Jejuni <b>BACTERIAL</b>	Campylobacteriosis	Undercooked meat, especially poultry, also unpasteurised milk, shellfish
24 hours - 14 days (avg. 3 - 4 days)	Severe abdominal cramps; watery and then bloody diarrhoea; HUS;	Verocytotoxin- producing Escherichia	E. Coli Food poisoning	Minced beef products e.g. beef burgers, other meat

	TTP	Coli (VTEC) <b>BACTERIAL</b>		products, milk, dairy products, fresh products, unpasteurised fruit and vegetable juices
24 hours - 14 days (avg. 7 days)	Nausea; abdominal cramps; diarrhoea (frequent and watery but becoming frothy, greasy and offensive)	Giardia Lamblia	Giardiasis	Usually waterborne or foodborne outbreaks, which have been linked to salads (noodle, fruit), ice and raw sliced vegetables
48 hours	Dizziness; headaches; seizures; confusion; short-term memory loss; respiratory difficulty; coma; <b>death</b>	Domoic Acid <b>TOXIN</b>	Amnesic Shellfish Poisoning (ASP)	Molluscs such as mussels, clams, oysters and scallops
2 - 5 days	Profuse watery diarrhoea; rapid dehydration; <b>may lead to death</b>	Vibrio Cholerae <b>BACTERIAL</b>	Cholera	Primary waterborne but also associated with shellfish and crustaceans
3 - 7 days	Abdominal pain; diarrhoea; mild fever; vomiting	Yersinia Enterocolitica <b>BACTERIAL</b>	Yersiniosis	Pork
3 - 56 days (avg. 12 - 20 days)	Fever; constipation; abdominal tenderness followed by "pea-soup diarrhoea"; septicaemia; peritonitis; <b>may lead to death</b>	Salmonella Typhi and Salmonella Paratyphi <b>BACTERIAL</b>	Typhoid and Paratyphoid Fever	Wide variety of faecally-contaminated foods that require a lot of handling e.g. milk and dairy products, shellfish, raw fruit and vegetables
3 - 70 days	Flu-like illness followed by septicaemia (with meningitis; encephalitis; abortion/stillbirth); <b>may lead to death</b>	Listeria Monocytogenes	Listeriosis	Wide variety of foods including ready-to-eat delicatessen products (e.g. soft ripened cheese, pâté, coleslaw, cooked meats), milk and dairy products, meat and poultry, seafood
4 - 28 days	Diarrhoea; abdominal pain; vomiting; swelling around eyes and face; conjunctivitis; fever; muscle soreness; rashes; splinter haemorrhages	Trichinella Spiralis <b>PARASITE</b>	Trichinellosis	Pork
10 - 13 days	Swollen lymph glands; fatigue; fever; sore throat; muscle aches	Toxoplasma Gondii <b>PARASITE</b>	Toxoplasmosis	Raw or undercooked meet, especially pork, lamb, and

	and pains; aching joints; rashes			venison
15 - 50 days	General Malaise; mild gastroenteritis (nausea, vomit, diarrhoea, abdominal pain, fever) jaundice; loss of appetite	Hepatitis A Virus (HAV) <b>VIRUS</b>	Hepatitis	(Salad) vegetables, foods that are extensively handled in their preparation, mussels, clams, and soft fruits e.g. berries
30 days	Fever; general malaise; fatigue; loss of appetite and weight; pain in the liver/intestines	Fasciola Hepatica <b>PARASITE</b>	Fascioliasis	Watercress, cress
3 - 6 months	(Sometimes) gastroenteritis; insomnia; hunger pains; anorexia; weight loss; abdominal pain	Taenia Saginata and Taenia Solium <b>PARASITE</b>	Taeniasis	Raw or undercooked beef (T. Saginata) or pork (T. Solium)
Unknown	Either watery diarrhoea/abdominal pain/ nausea or mild diarrhoea with blood and mucus	Aeromonas Species <b>BACTERIAL</b>	Associated with diarrhoea	Association with fish and shellfish has been suggested; possibly also red meats and poultry, raw milk and fresh vegetables